

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

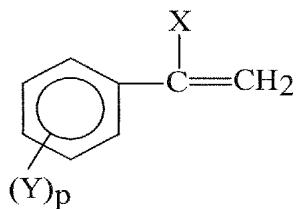
Listing of Claims:

Claims 1-8 (Canceled)

9. (Currently Amended) A composition, in accordance with ~~claim 8~~ ~~claim 35~~, further characterized in that ~~wherein~~ the B/S ratio is between 70/30 and 60/40.

10. (Currently Amended) A composition, in accordance with ~~claim 1~~ ~~claim 35~~, further characterized in that ~~wherein~~ the molecular weight of block copolymer is within the 100,000 g/mol to 450,000 g/mol interval.

11. (Currently Amended) A composition, in accordance with ~~claim 1~~ ~~claim 35~~, further characterized in that ~~wherein~~ the vinyl aromatic monomer is an ethylenic unsaturated compound with formula (I)



(I)

in which X represents one hydrogen or one alkyl radical with C₁-C₄; p is zero or a whole number between 1 and 5; and Y represents a halogen or an alkyl radical with C₁-C₄.

12. (Currently Amended) A composition, in accordance with claim 11, ~~further characterized in that~~ wherein the vinyl aromatic monomer is selected ~~among~~ from the group consisting of vinyl toluene, styrene, methylstyrene[•], mono-, di-, tri-, tetra- and pentachlorostyrene and the corresponding alpha-methylstyrene, alkylated styrenes in the core and the corresponding alpha-methylstyrenes; ortho- and para-methylstyrenes, ortho- and para-ethylstyrenes, ortho- and para-methyl-alpha-styrenes, and mixtures or combinations among them ~~thereof~~ or with other copolymerizable monomers.

13. (Currently Amended) A composition in accordance with claim 12, ~~further characterized in that~~ wherein the monomers copolymerizable with the vinyl aromatic monomer are selected ~~among~~ from the group consisting of acrylic monomers, methacrylic monomers, acrylonitrile and maleic anhydride.

14. (Currently Amended) A composition, in accordance with ~~claim 1~~ ~~claim 35~~, ~~further characterized in that~~ wherein the alkadiene or conjugated diene has 4 to 8 carbon atoms in its molecule.

[•] Vinyl toluene and methylstyrene are synonyms; they have the same CAS No. 25013-15-4.

15. (Currently Amended) A composition, in accordance with claim 14, ~~further characterized in that~~ wherein the alkadiene or conjugated diene is selected among ~~from the~~ group consisting of 1,3-butadiene, isoprene, 2,3-dimethyl-1,3-butadiene, piperylene and mixtures among them thereof.

Claims 16-17. (Canceled)

18. (Currently Amended) An impact-resistant thermoplastic composition ~~of the type that comprises comprising~~ a vinyl aromatic monomer and an impact-modifier material consisting ~~in of~~ a block copolymer that comprises as monomers an alkadiene ~~(conjugated diene)~~ conjugated diene and a vinyl aromatic compound, ~~being such composition~~ characterized in that ~~wherein~~ said composition comprises:

- A) 3 % to 50 % ~~in~~ by weight of impact-modifier material, such material having, at least, one block of polydisperse vinyl aromatic compound.
- B) 97 % to 50 % ~~in~~ by weight of the vinyl aromatic monomer.

19. (Currently Amended) A thermoplastic composition, in accordance with claim 18, ~~further characterized in that~~

wherein the polydispersity of, at least, one block of the vinyl aromatic monomer of the impact-modifier material is within the 1.01 to 4 interval.

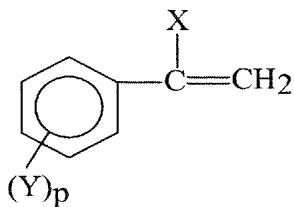
20. (Currently Amended) A thermoplastic composition, in accordance with claim 18, ~~further characterized in that~~ wherein the molecular weight of, at least, one block of the vinyl aromatic monomer of the impact-modifier material is within the 5,000 g/mol to 420,000 g/mol interval.

Claims 21-25. (Canceled)

26. (Currently Amended) A composition, in accordance with ~~claim 25~~ ~~claim 18~~, ~~further characterized in that~~ wherein the B/S ratio is between 70/30 and 60/40.

27. (Currently Amended) A thermoplastic composition, in accordance with claim 18, ~~further characterized in that~~ wherein the molecular weight of block copolymer is within the 100,000 g/mol to 450,000 g/mol interval.

28. (Currently Amended) A thermoplastic composition, in accordance with claim 18, ~~further characterized in that wherein the vinyl aromatic monomer is an ethylenic unsaturated compound with of formula (I) (II)~~



(I) (II)

in which X represents one hydrogen or one C₁-C₄ alkyl radical ~~with C₁-C₄~~; p is zero or a whole number between 1 and 5; and Y represents a halogen or an alkyl radical ~~with C₁-C₄~~ C₁-C₄.

29. (Currently Amended) A composition, in accordance with claim 28, ~~further characterized in that wherein the vinyl aromatic monomer is selected among from the group consisting of vinyl toluene, styrene, methylstyrene², mono-, di-, tri-, tetra- and pentachlorostyrene and the corresponding alpha-methylstyrene, alkylated styrenes in the core and the corresponding alpha-methylstyrenes; ortho- and para-~~

² Vinyl toluene and methylstyrene are synonyms; they have the same CAS No. 25013-15-4.

methylstyrenes, ortho- and para-ethylstyrenes, ortho- and para-methyl-alpha-styrenes, and mixtures or combinations among them thereof or with other copolymerizable monomers.

30. (Currently Amended) A composition in accordance with claim ~~30²⁹~~, further characterized in that wherein the monomers copolymerizable with the vinyl aromatic monomer are selected among acrylic monomers, metacrylic, acrylonitrile and maleic anhydride.

31. (Currently Amended) A thermoplastic composition, in accordance with claim 18, further characterized in that wherein the alkadiene or conjugated diene has 4 to 8 carbon atoms in its molecule.

32. (Currently Amended) A composition, in accordance with claim 31, further characterized in that wherein the alkadiene or conjugated diene is selected among from the group consisting of 1,3-butadiene, isoprene, 2,3-dimethyl-1,3-butadiene, piperylene and mixtures among them thereof.

Claim 33 (Canceled)

34. (Currently Amended) A thermoplastic composition, in accordance with claim 18, further characterized in that wherein the composition further includes ether coadjuvant

agents selected among from the group consisting of mineral oil, molecular weight regulators, antioxidants, pigments, charges and thermal stabilizers.

35. (New) A composition for producing impact-resistant thermoplastic materials consisting of a block copolymer that comprises as monomer a conjugated diene and a vinyl aromatic compound;

wherein the polymer blocks are selected from the group consisting of linear, radial, perfect and partially randomized blocks with the formula $[B(B/S)S_{ij}]^Z$,

wherein i and j are integers equal to or greater than 1;

Z is a residue of a coupling agent or a termination agent;

S is a vinyl aromatic monomer; and

B is a conjugated diene which may optionally be totally or partially hydrogenated;

wherein the B/S ratio is between 20/80 and 80/20.

36. (New) A thermoplastic composition in accordance with claim 18, wherein the copolymer blocks are selected from the group consisting of linear blocks, radial blocks, perfect blocks, and partially randomized blocks of the formula $[B(B/S)S_{ij}]^Z$,

wherein i and j are integers equal to or greater than 1;

Z is a residue of a coupling agent or a termination agent;

S is a vinyl aromatic monomer; and

B is a conjugated diene which may optionally be totally or partially hydrogenated;

wherein the B/S ratio is between 70/30 and 60/40.